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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,977	11/26/2003	Abdullatif Chehab	2003P13578US	9036

7590

11/23/2005

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

RODRIGUEZ, WILLIAM H

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,977

Applicant(s)

CHEHAB ET AL

Examiner

William H. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005 and 28 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 12-16 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

FINAL REJECTION

This office action is in response to the response to restriction requirement filed 10/21/05 and the amendment and remarks filed 7/28/05.

Election/Restrictions

1. The examiner has withdrawn the restriction requirement. Thus, all claims 1-10, 12 and new claims 15-18 are being examined.

Specification

2. The specification is objected to because it contains at least one typographical error (i.e., engine). See particularly page 2 line 23 of the specification. Appropriate correction is required.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **“the engine controller operatively connected to the valve (in claims 10 and 18)”** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Hallinger et al. (US 3,975,901)**. **Hallinger** teaches the invention as disclosed and as claimed, that is, an apparatus and method of using it comprising: a turbine engine (see lines 2-3 of abstract) comprising a compressor, a combustor 5, turbine blades 20 attached to a disc and mounted on a rotor, a stationary blade ring 28, a combustion-gas channel 16 and 13 extending from the combustor to the blade ring, an inlet for the compressor air, wherein the hot combustion gases and cold compressor gases mix in chamber 11, a valve 8 which is selectively movable (column 2 line 66 to column 3 line 3) based on an engine operating parameter (temperature) so as to selectively supply the mixture to the stationary blade ring

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(column 3 lines 20-27). Note that between the positions of supplying only cold air 17 or only hot air 16, the valve is in an in-between position wherein the two are mixed. Note that the mixing of the cold and hot gases is occurring as presently claimed in the transient or base/part load operation of the engine (col. 3, 11. 13-36 and in more detail 11. 23-27, and also col. 8, 11. 3-16, in particular 1. 16). Regarding the claimed specific numerical limitations of the load when the mixing occurs, this limitations are considered to be obvious design choices, that one of ordinary skill in the art would have known how to optimize in view of the specific temperatures, and choice of materials used in the design. The claimed transition is read on the location where hot gas 16 splits from the main hot gas 14 exiting the combustor and passing through the turbine. See particularly **Figures 1, 1a and 1b**.

Element 8 serves as a valve (opening and closing passages) to control the flow of fluids (cold, hot or a mixture of both) being supplied to the stationary blade ring 28. The opening and closing of valve 8 is controlled by the thermal expansion and contraction of it. In order for thermal expansion or contraction to occur, an increase or decrease in the operating temperature of the turbine has to occur. As shown in Figure 1a, as the operating temperature of the turbine increases, valve 8 expands allowing both, the hot and cold fluids to pass through it so that a mixture of these fluids is supplied to the stationary blade ring for controlling the blade tip clearances. *Therefore, valve 8 selectively supplies the mixture to the stationary blade ring (column 3 lines 20-27) based on this engine operating parameter (temperature)*. Since the operation of valve 8 is dependent on the change of the operating parameter (temperature) of the turbine, *the valve itself monitors the change of this operating parameter*.

Allowable Subject Matter

6. Claims 10, 12-16 are allowed.
7. Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 7/28/05 have been fully considered but they are not persuasive because of the following reason(s).

In the applicant's response, **applicant argues** that "*in Halliger control of the blade tip clearances is totally at the mercy of the thermal reaction of the obturator, ...the only parameter accounted for in the Halliger system is thermal expansion or contraction of the obturator*".

In order for thermal expansion or contraction to occur, an increase or decrease in the operating temperature of the turbine has to occur. As shown in Figure 1a, as the operating temperature of the turbine increases, valve 8 expands allowing both, the hot and cold fluids to pass through it so that a mixture of these fluids is supplied to the stationary blade ring for controlling the blade tip clearances. Therefore, valve 8 selectively supplies the mixture to the stationary blade ring (column 3 lines 20-27) based on this engine operating parameter (temperature).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

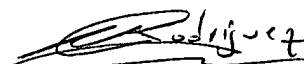
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Rodriguez
Primary Examiner
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11/17/05